



FACILITATION COMMITTEE
27th session
Agenda item 12

FAL 27/12
6 October 1998
Original: ENGLISH

SHIP/PORT INTERFACE

Report of the Working Group on Ship/Port Interface

SUMMARY

- Executive summary:** The Committee, at its twenty-sixth session (7 to 11 September 1998), considered the report of the SPI Working Group on urgent matters (FAL 26/WP.4) including its work programme (FAL 26/WP.2) and took action as indicated in document FAL 26/19, paragraphs 12.39. This document provides the report of the SPI Working Group on the remaining items for consideration.
- Action to be taken:** Paragraph 9.1
- Related documents:** FAL 26/WP.2, FAL 26/WP.4 and FAL 26/19

1 GENERAL

Introduction

1.1 The Working Group on Ship/Port Interface met from 7 to 11 September 1998 under the chairmanship of Captain H.-J. Roos (Germany).

1.2 The Working Group was attended by delegations from the following Member Governments:

BANGLADESH
CANADA
CHINA
GERMANY
GHANA
GREECE
LITHUANIA
MALAYSIA
MALTA

NETHERLANDS
NORWAY
POLAND
REPUBLIC OF KOREA
SWEDEN
THAILAND
UNITED KINGDOM
UNITED STATES

and the following Associate Member of IMO:

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HONG KONG, CHINA

1.3 The session was also attended by observers from the following non-governmental organizations in consultative status:

INTERNATIONAL UNION OF MARINE INSURANCE (IUMI)
 INTERNATIONAL CONFEDERATION OF FREE TRADE UNIONS (ICFTU)
 INTERNATIONAL ASSOCIATION OF PORTS AND HARBORS (IAPH)
 INTERNATIONAL ASSOCIATION OF CLASSIFICATION SOCIETIES (IACS)
 INTERNATIONAL CARGO HANDLING CO-ORDINATION ASSOCIATION (ICHCA)
 INSTITUTE OF INTERNATIONAL CONTAINER LESSORS (IICL)
 OIL COMPANIES INTERNATIONAL MARINE FORUM (OCIMF)
 INTERNATIONAL FEDERATION OF SHIPMASTERS' ASSOCIATIONS (IFSMA)
 PERMANENT INTERNATIONAL ASSOCIATION OF NAVIGATION CONGRESSES
 (PIANC)
 INTERNATIONAL ASSOCIATION OF DRY CARGO SHIPOWNERS (INTERCARGO)

1.4 Having considered the matters relevant to the ship/port interface, including its report on the last session (FAL 26/12), in plenary, the Working Group continued its work, recalling the instructions by the Committee:

- .1 to consider all documents referred to it (FAL 26/12/1, FAL 26/12/2, FAL 26/12/3, FAL 26/12/4, FAL 26/12/5, FAL 26/12/6, FAL 26/12/7, FAL 26/12/8, FAL 26/12/9, FAL 26/12/10, FAL 26/12/11, FAL 26/12/12, FAL 26/12/13, FAL 26/12/14, FAL 26/12/15, FAL 26/12/16, FAL 26/INF.5, FAL 26/INF.9, FAL 26/INF.10, FAL 26/2 and MEPC 42/6/1).
- .2 to submit a report on urgent matters including its future work programme to the Committee on Thursday, 10 September 1998;
- .3 to give an oral progress report on Friday, 11 September 1998; and
- .4 to submit its full report to FAL 27.

1.5 As instructed by the Committee, the Working Group submitted its report on urgent matters (FAL 26/WP.4) (reproduced as annex 1 to this report) and its future work programme (FAL 26/WP.2) on Thursday, 10 September 1998, and consequently reports only on the remaining matters.

2 ESTABLISHMENT AND OPERATION OF RECEPTION FACILITIES INCLUDING FUNDING MECHANISMS

2.1 In addition to the considerations on this matter, that were reported on in the report on urgent matters (FAL 26/WP.4, paragraphs 2.2 to 2.5), the Working Group was informed by Sweden that they are conducting courses on implementing the issues addressed in the Comprehensive Manual on Port Reception Facilities.

2.2 The Working Group welcomed the offer by Sweden to submit the outline and contents of the course on reception and handling of ship generated wastes in ports to FAL 27 for consideration by the

Working Group as to its suitability to become an IMO model course.

3 MODEL COURSES ON CARGO HANDLING IN PORT AREAS

Model course on the safe and secure packing of cargo transport units

3.1 Having noted the information provided by Sweden (FAL 26/INF.5), the Working Group thanked the Government of Sweden for providing funds for the development of a model course on the safe and secure packing of cargo transport units and the work done so far.

3.2 The Working Group agreed to the outline of the model course proposed by Sweden, attached as annex 2 to this report, and was further informed that the model course would be available for assessment at the next session. The Secretariat was requested to inform the MSC and the DSC Sub-Committee of the action taken by the Working Group on this matter.

Developments in container handling

3.3 The Working Group noted the information provided by ICHCA in document FAL 26/INF.9 regarding the recent developments in lifting container boxes not only by vertical means, but also by other methods e.g. 4 legged slings.

3.4 The Working Group welcomed that ISO TC 104 has put this aspect on their work programme for developing standards on this issue until the year 2000 and offered to give advice where needed.

3.5 The Working Group noted with concern the recent developments in lifting two boxes linked together vertically, as:

- .1 the twist locks and corner fittings are not designed and tested for this purpose because of lack of standards;
- .2 different types of twist locks are used on board the ships, e.g. locking left and right; and
- .3 the actual weight of the containers may not be known.

3.6 The Working Group therefore welcomed the work of ISO TC 104 on this matter by developing new standards for twistlocks.

3.7 The Working Group decided to defer any further discussions on this matter until the standards are available and tested, but urges cargo terminals already adopting these procedures to ensure that only one type of twistlock is used on a ship and only lifting gear with weighing devices is used in this type of operation.

Safety of container securing operation

3.8 The Working Group agreed with the comments made by DE 41 (FAL 26/2, paragraph 26) with regard to safe practices in ports to enhance container securing operations, but felt that the new developments in ISO were a step in this direction and that there is presently no need to address this issue in the Working Group.

4 PROMOTION OF EDI IN MATTERS RELATING TO PORT MANAGEMENT

Dangerous goods notification

4.1 The Working Group recalled that FAL 25 (FAL 25/19, paragraph 5.7 and FAL 25/WP.9) recommended in principle the use of the IFTDGN Implementation Guide referred to in document SPI 4/10 (Germany) as the equivalent of IMO FAL Form 7 (Dangerous Goods Declaration) and invited Member Governments to use the EDI method for notification of dangerous goods wherever possible.

4.2 Having considered the information provided by the Netherlands (FAL 26/INF.10) with regard to the further developments of the PROTECT Implementation Guide, the Working Group was of the opinion that the reservations expressed by the EDI Drafting Group during FAL 25 (FAL 25/WP.9, paragraph 5.2) regarding the present version of the Guide and the harmonisation recommendations being developed by ITIGG, have been adequately addressed by the Protect Management Group and that once the ITIGG compliant version of the PROTECT IFTDGN Message Implementation Guide is available, its use should be recommended to all governments and ports.

4.3 The Working Group recommended that the Committee invites Member Governments and other organizations concerned to use the EDI method for notification of dangerous goods and to provide the Committee with relevant information thereon. The EDI Drafting Group might consider drafting a FAL circular to that effect for approval by the Committee.

Data elements for the notification of the arrival of ships

4.4 The Working Group recalled that FAL 25 (FAL 25/19, paragraph 5.11) approved FAL.6/Circ.4 on Data elements required for facilitating the turnaround of ships, prepared by the Working Group, and invited Governments to advise FAL 26 of any changes or amendments, which port authorities or managements may require to the draft BERMAN message, as set out at annex to that circular, to enable them to adopt such a message.

4.5 Noting that no responses had been received from Member Governments with regard to data required for facilitating the turnaround of ships (FAL.6/Circ.4) in connection with the draft BERMAN message, the Working Group concluded that the present draft apparently does not create difficulties to the ports situated in Member countries and therefore encouraged the EDI Drafting Group to continue its work on this matter.

5 AVAILABILITY OF TUG ASSISTANCE

5.1 The Working Group noted the information provided by IAPH (FAL 26/12/14) on the book published by the Nautical Institute "A Practical Guide to Tug Use in Ports" and had the possibility of having a brief look at a few copies provided during the session.

5.2 As not all members had a copy available, the Working Group decided to ask them to try to obtain that book, so that a thorough discussion could be held at the next session. The Working Group was also provided with a copy of the assessment methods used by the Port of London, UK and in the Port of Szczecin, Poland.

5.3 Having further discussed this matter, the Working Group concluded that the development of a single assessment method to be used in all ports was impractical and proposed to collect available assessment methods already used in various ports around the world and combine them into one compendium, which could then be made available to anyone interested in it. Member Governments and relevant organizations, such as IMPA, IAPH and IHMA, are invited to submit any available methods used in their ports to FAL 27.

5.4 The Working Group also noted the outcome of a survey conducted by ITF on tugboat assistance in Port Areas, which was provided by ICFTU during the session. Noting that this survey showed a lack of applicable standards in many areas, the Working Group requested ICFTU to make it available to FAL 27 and MSC 70 for their perusal and decision regarding the possibility of further actions being required by the Working Group.

6 INFORMATION LEAFLET FOR TERMINAL OPERATORS LOADING AND UNLOADING BULK CARGOES

Information leaflet

6.1 The Working Group noted that the work carried out by IACS in preparing a second version of its brochure (Bulk Carriers: Guidance and information on bulk cargo loading and discharging to reduce the likelihood of over-stressing the hull structure) dedicated for use by terminal personnel, had not been completed. The same applied to the pamphlet being under development by the ICHCA Safety Panel and the comprehensive manual developed by the Joint Industry Working Group.

6.2 As these publications will most likely be available within the next year, the Working Group decided to defer any discussion on this matter until its next session, when those publications will be available for evaluation.

Model course for use by bulk terminal operators

6.3 The Working Group considered the document submitted by Canada (FAL 26/12/8) and expressed appreciation for the excellent work done with respect to the course outline for such a model course.

6.4 Taking into consideration the remarks made by France in plenary, that there is a need for more technical syllabi for model courses, the Working Group decided to expand the present outline to include more detailed instructions regarding its contents under each heading on the understanding that this course would be designed for terminal representatives required by the Code of Practice for the Safe Loading and Unloading of Bulk Carriers (BLU Code) only.

6.5 The Working Group thanked those members of the Working Group who offered to undertake this work intersessionally, and especially Canada for the offer to act as co-ordinator. The outline of the model course and the list of members participating in that work is attached as annex 3.

6.6 As the development of a complete model course cannot be done by the Working Group, since this would require much more time than is available, the Working Group invited the Committee to request the Secretariat to try obtaining funds for the employment of a consultant to do this work. As this sub-item concerned model courses relating to cargo handling in ports, which was currently covered under item 2 on its work programme, the Working Group was of the opinion that it should be considered under that item at the next session.

7 IMPLEMENTATION OF IMO INSTRUMENTS AND TRAINING REQUIREMENTS FOR CARGO RELATED MATTERS

7.1 The Working Group considered all documents submitted in relation to training requirements, as requested by the Committee and DSC 3 (FAL 26/2, paragraphs 28.10 to 28.12) and thanked the relevant countries/organizations for their valuable contributions.

7.2 Taking into account the list of instruments likely to contain training implications (FAL 26/2, annex 1) and the information provided in document FAL 26/12/15 (Secretariat), the Working Group agreed to delete the London Convention from the list, and assign priority to the remainder as set out in annex 4 to this report.

7.3 Noting that DSC 3 had decided to start with the IMDG Code, the Working Group was of the opinion that several other instruments relate closely to the Code and, therefore, decided to group them together and to assign them the same priority.

7.4 Noting that bulk carrier safety and reception facilities are given high priority within the Organization, the Working Group also decided that these instruments should also be considered with high priority. As the Recommendations on the Safe Transport of Dangerous Cargoes and Related Activities in Port Areas now include emergency response procedures and also have a significant impact on ship safety, they also were given high priority.

7.5 The reason for assigning medium priority to the BC Code was the anticipated revision at DSC 4. At present, the International Code for the Safe Carriage of Grain in Bulk and the Recommendations on the Safe Use of Pesticides in Ships, which have been grouped together, are of lesser importance. The conventions and mandatory codes received low priority, because compliance with them is mandatory and they are mainly concerned with ship construction and equipment.

7.6 The Working Group, considering the draft section 28 (training) of the IMDG Code (DSC 3/WP.3, annex 5), felt that paragraph 28.2 reflected function specific items instead of target groups/persons to be trained. After discussion, it was felt that instructions received from DSC 3 were not specific concerning which direction the Working Group should proceed regarding the scope of training (DSC 3/15, paragraph 8.23.10). As a result, the Working Group proceeded to consider function specific items rather than target groups/persons as mentioned in document DSC 3/WP.3, annex 5, paragraph 28.2. In doing so, the Working Group agreed that the list was not suitable for identifying the scope of training required and, therefore, amended it by separating those items that required a different scope.

7.7 The Working Group then placed the recommended specific training areas against each item listed, as set out in annex 5, on the understanding that this list was not exhaustive and did not cover general familiarisation training.

7.8 The Secretariat was requested to extract the available training materials (manuals, schemes, etc.) contained in annex 1 of the document FAL 26/12/3 (United Kingdom), place them against the recommended training areas and to attach annexes 2 to 5 of that document to annex 5 of this report before submitting it to DSC 4.

7.10 With regard to the remaining documents submitted, the Secretariat was requested to compile the information contained therein into one document for use at a later stage.

7.11 The Working Group recommended that members who participated in the present session should also participate in the forthcoming work of DSC 4, since this would greatly facilitate the work.

7.12 The Working Group requested the Secretariat to inform DSC 4 of the action taken on this matter.

8 CONSIDERATIONS RELATING TO THE WORKING GROUP'S WORK PROGRAMME

8.1 With regard to the comments made in plenary about the draft revised work programme (FAL 26/WP.2), especially the need to clearly define the scope of work and the reasons for doing so, the Working Group invited the Committee to consider the proposals as set out in the ensuing paragraphs.

Establishment and operations of reception facilities

8.2 As Sweden has proposed to submit to FAL 27 the outline and contents of the course on reception and handling of ship generated wastes in ports (paragraph 2.2), the Working Group recommended that the Committee includes an item on the development of a model course for this aspect on its work programme with a target completion date of 2001, subject to the approval of MEPC.

Model courses on cargo handling in port areas

8.3 Based on the progress made, the Working Group proposed to limit its work to the developments of model courses for:

- .1 safe and secure packing of cargo transport units with a target completion date of 2001; and
- .2 terminal representatives of solid bulk cargo terminals with a target completion date of 2002.

Implementation of IMO Instruments and training requirements for cargo related matters.

8.4 The Working Group proposed to initially limit its work to developing training requirements for:

- .1 IMDG Code, CSC, CSS Code and IMO/ILO/UN ECE Guidelines for Packing of Cargo Transport Units with a target completion date of 2001; and
- .2 BLU Code with a target completion date of 2001,

subject to the approval of the MSC and endorsement by the DSC Sub-Committee.

9 ACTION REQUESTED OF THE COMMITTEE

9.1 The Committee is invited to approve the report in general, and, in particular, to:

- .1 note the action taken by the Working Group on the possible development of a model course on reception and handling of ship generated wastes in ports and refer the matter to MEPC for consideration (paragraph 2.2);

- .2 endorse the action taken by the Working Group on the development of a model course on the safe and secure packing of cargo transport units (paragraph 3.2);
- .3 endorse the action taken by the Working Group on the recent developments in container handling (paragraphs 3.3 to 3.7);
- .4 endorse the view and action taken by the Working Group on safe practices in ports to enhance container securing operations (paragraph 3.8);
- .5 note the view of the Working Group on the use of the EDI method for notification of dangerous goods and invite Member Governments and other organizations concerned to use the EDI method for notification of dangerous goods and to provide relevant information thereon (paragraphs 4.2 and 4.3);
- .6 endorse the view of the Working Group on the draft BERMAN message that the present draft does not create difficulties to the ports situated Member countries and therefore encourage the EDI Working Group to continue its work on this matter (paragraph 4.5);
- .7 endorse the action taken by the Working Group on the issue of development of a methodology for the assessment of adequacy and availability of tug assistance in port waters (paragraphs 5.1 to 5.4);
- .8 endorse the action taken by the Working Group on the development of an information leaflet for terminal operators (paragraph 6.2);
- .9 endorse the action taken by the Working Group on the development of a model course for use by terminal operators (paragraphs 6.3 to 6.5);
- .10 request the Secretariat to obtain funding for the employment of a consultant to develop a complete model course for use by terminal operators (paragraph 6.6);
- .11 endorse the action taken by the Working Group on implementation of IMO instruments and training requirements for cargo-related matters (paragraphs 7.1 to 7.12); and
- .12 consider the Working Group's considerations relating to its work programme and take appropriate action (paragraphs 8.1 to 8.4).

ANNEX 1

REPORT OF THE SPI WORKING GROUP ON URGENT MATTERS TO FAL 26

1 GENERAL

The Working Group considered the urgent matters, the outcome of which is reflected in the relevant sections of this report. The Working Group's report on the remaining matters dealt with will be submitted to the next session of the Committee.

2 ESTABLISHMENT AND OPERATION OF RECEPTION FACILITIES INCLUDING FUNDING MECHANISMS

2.1 The Working Group had before it documents FAL 26/12/1 (Netherlands) and MEPC 42/6/1 (Netherlands) containing a draft revised chapter 11 of the Comprehensive Manual on Port Reception Facilities which was submitted to FAL 26 for information.

2.2 The Working Group congratulated the Netherlands and the Correspondence Group on the excellent document, and recommended the Marine Environment Protection Committee to approve the draft, taking into account any comments that are submitted directly to MEPC.

2.3 The Working Group recognizes that the inadequacy of reception facilities can be a major problem for the shipping industry leading to consequences which could represent a threat to the marine environment. The Group endorsed the statement made by the delegation of Greece in plenary that there is a need to co-ordinate the efforts being made by many different bodies to solve this problem.

2.4 The delegation from Sweden presented a leaflet entitled "The Baltic Strategy for Port Reception Facilities for Ship-generated Wastes and Associated Issues". The Group requested Sweden to make the leaflet available to MEPC 42.

Unwanted aquatic organisms transported in ballast water

2.5 The Working Group was informed by the Secretariat of the planned regulations on ballast water management, and requested the Secretariat to inform MEPC of the SPI Working Group's willingness to provide advice on matters arising therefrom affecting or likely to affect port/terminal operations.

3 OUTCOME OF THE 4TH BREMEN CONFERENCE

Minimum standards for education and training of Port Marine Personnel

3.1 During the discussion of the report of the SPI Working Group on this matter (FAL 26/12, paragraph 9.4) in plenary, the Committee agreed in principle to add such an item onto the work programme of the SPI Working Group and instructed the Working Group to consider the following issues:

- .1 whether this item falls under the remit of another body within the Organization, e.g. MSC, the STW Sub-Committee or any other international organization.
- .2 who would be the right body to start the work?
- .3 which areas require standards to be developed?

- .4 an outline of the standards to be developed.

3.2 The results of the discussions within the Working Group are summarized below:

- .1 the Working Group reconfirmed the need for developing minimum standards for port marine personnel not only because of the foreseeable shortfall of qualified seafarers in the long run, but also because of the changed requirements with regard to education and training for port personnel due to rapid technological developments in the port and marine industry and perception of the public.
- .2 with regard to who should be the appropriate body within the Organization, the Working Group was of the opinion that this matter requires specific knowledge of ports and their operations which is only available within the FAL Committee and its SPI Working Group.
- .3 noting that training and education requirements for pilots and VTS operators are presently being considered by MSC and its STW Sub-Committee in close co-operation with IALA and IMPA, the Working Group agreed that this matter need not be addressed by SPI.
- .4 since the deliberations of MSC and the STW Sub-Committee will have quite an impact on port operations, as the provision of pilotage and VTS Services form part of the services provided by port authorities in many ports around the world, the Working Group invites the Committee to invite MSC to keep the Working Group informed about the developments, so that appropriate input can be provided where it is deemed to be necessary.

3.3 Having been informed by the chairman of the Working Group that some work has already been carried out by IAPH and the International Harbour Masters' Association (IHMA) with regard to which areas and which personnel should be covered, the Working Group asked the organizations concerned to provide the Group with an information paper on the subject. The organizations agreed to do so for FAL 27.

Improving ship/shore communications

3.4 The comments received in plenary about the action requested of the Committee and other bodies of the Organization in respect of improving ship/shore communications (FAL 26/12, paragraph 11.13) showed that the Working Group's report was not specific enough, which lead to misinterpretation.

3.5 It was not the Working Group's intention to prepare yet another circular, as two circulars (MSC/Circ.743 and FAL.6/Circ.5) have recently been issued on this matter.

3.6 It was their intention to invite the Committees concerned (MSC, MEPC, FAL) to attach high priority to the communications aspect, similar to that of the human factor, and to request their subsidiary bodies to also consider this aspect including the development of checklists and manuals, where appropriate, in their work.

4 IMPLEMENTATIONS OF IMO INSTRUMENTS AND TRAINING REQUIREMENTS FOR CARGO RELATED MATTERS

Implementation of IMO instruments

4.1 The Working Group noted the progress made by DSC 3 and is of the opinion that the first results will emerge within the next year. However, it also noted that the present discussion concentrates on training only. The implementation aspect has not yet been addressed.

4.2 While training is certainly one tool for improving implementation, the Working Group was of the opinion that discussions on how to ensure implementation of present instruments, and those being developed, should start now.

4.3 The Working Group noted with great interest that there are moves within the maritime industry to require commercial contracts to comply with IMO instruments relating to sea transport. This may also work with regard to obligations contained in those instruments for ports and terminals.

4.4 However, as far as ship's safety and marine environment protection is concerned there are legally binding conventions covering these aspects. This is not the case for most port safety related matters.

4.5 The development of an international convention or the extension of present conventions, e.g. the FAL Convention to cover port safety aspects, in close co-operation with ILO, may be another way of facilitating the implementation of IMO instruments where the shoreside is involved. But there may also be other means to achieve the same objective.

4.6 The Working Group therefore invites the Committee and other bodies of the Organization to consider the implementation aspects of its present and future instruments at the ship/port interface from their perspective as a matter of high priority.

Training requirements for cargo related matters

4.7 As requested by DSC 3, the Working Group started with the development of training requirements for the transport of packaged dangerous goods covered by the IMDG Code.

4.8 The Working Group was informed that there are training requirements already in place for land transport within the EU and for all persons engaged in the handling of dangerous goods in Canada.

4.9 Recalling the need to avoid duplication of work, the Working Group felt that there may be other countries or regions where such requirements are already available.

4.10 It therefore prepared a draft circular, as set out in annex 1, requesting that all countries or regions submit to DSC 4 any material that could assist DSC 4 and the next session of the SPI Working Group in the development of training requirements in connection with the transport of packaged dangerous goods under the IMDG Code.

5 UPDATING OF THE BIBLIOGRAPHY

5.1 As instructed by the Committee, the Working Group considered document FAL 26/12/9, (Secretariat) and the information provided by ICHCA, IICL and IFSMA, and prepared a list of publications to be added to the list of existing publications relevant to the subject areas and topics related to the ship/port interface (FAL.6/Circ.6), as set out in annex 2 to this report.

5.2 The Working Group felt that the use of the bibliography could be facilitated by grouping the publications by origin under each subject area and topic, giving IMO the prefix 1, and continuing the numbering in alphabetical order for each organisation responsible for the publication.

5.3 The Committee is invited to approve the amendments (annex 2) and the new layout and to instruct the Secretariat to issue a new consolidated list as a FAL.6 circular as early as possible, and, at the same time, to request organizations whose publications are listed in that circular to review their listed publications and inform the Secretariat by 1 June 1999:

- .1 of any listed publications which are no longer available or which are out of date;
- .2 confirm that the remaining listed publications remain current; and
- .3 of any further publications that should be added to the list.

ACTION REQUESTED OF THE COMMITTEE

6.1 The Committee is invited to approve this report in general, and, in particular, to:

- .1 note the action taken by the Working Group on the matter of establishment and operation of reception facilities including funding mechanisms (paragraphs 2.2 to 2.4);
- .2 note the Working Group's views and action taken on the issue of minimum standards for education and training of port marine personnel and inform the Committees concerned accordingly (paragraphs 3.1 to 3.3);
- .3 invite MSC to keep the Working Group informed of the development of training and education requirements for pilots and VTS operators (paragraph 3.2.4);
- .4 note that the organizations concerned agreed to submit information on which areas and personnel require standards to FAL 27 (paragraph 3.3);
- .5 consider the view and intention of the Working Group on improving ship/shore communications and take appropriate action, as invited by the Group (paragraphs 3.5 and 3.6);
- .6 note the Working Group's view on implementation of IMO instruments, in particular, the possible development of an international convention or the extension of present conventions to cover port safety aspects (paragraphs 4.1 to 4.5);

- .7 invite the other bodies of the Organization to consider the implementation aspects of its present and future instruments at the ship/port interface from their perspective as a matter of high priority (paragraph 4.6);
- .8 approve the draft MSC/FAL circular on training requirements relating to the transport of Packaged Dangerous Goods and invite MSC to approve it and inform the DSC Sub-Committee of the action taken (paragraph 4.10 and annex 1); and
- .9 approve the amendments to the bibliography (FAL.6/Circ.6) and the new layout of the list and to instruct the Secretariat to issue a new consolidated list as a FAL.6 circular (paragraph 5.3 and annex 2).

ANNEX 1

FAL.6/Circ.7
18 September 1998

Ref. T3/3.01

SHIP/PORT INTERFACE

Training Requirements relating to the Transport of Packaged Dangerous Goods

- 1 The Maritime Safety Committee (MSC), at its sixty-ninth session (MSC 69/22, paragraph 9.18), endorsed the concern of the DSC Sub-Committee on the lack of training in the transport chain relating to the multimodal transport of dangerous goods, in particular in relation to the transport of dangerous goods by sea and tasked that Sub-Committee to develop, in co-operation with the SPI Working Group, multimodal training requirements.
- 2 To enable DSC 4 to further advance the process, the Facilitation Committee, at its twenty-sixth session, approved this circular, to receive the requested information by the deadline specified below and invited the MSC to endorse it and take action as appropriate.
- 3 The SPI Working Group, during its meeting concurrently with FAL 26, noted that a number of Member Governments had already adopted training requirements relating to certain aspects of the transport of packaged dangerous goods. In order to avoid duplication of work already undertaken and to encourage the harmonization of training requirements, Member Governments are requested to submit to the Secretariat by 25 December 1998, information of any existing requirements and of any relevant material in their country and the content of any such requirements or material, to assist the DSC Sub-Committee at its fourth session (22 to 26 February 1999) and the SPI Working Group at its next session (6 to 10 September 1999) in the development of training requirements in connection with the transport of packaged dangerous goods under the IMDG Code.

ANNEX 2

**LIST OF UPDATED INFORMATION TO BE INCLUDED IN THE LIST OF
EXISTING PUBLICATIONS RELEVANT TO THE SUBJECT AREAS
AND TOPICS RELATING TO THE SHIP/PORT INTERFACE**

1 Navigation

1.68 (NI) - High speed craft (ISBN: 18 700 77229) (1995)

4 Services

4.15 (IMO) - MARPOL 73/78 Consolidated Edition, 1997 (IMO-520E)

4.16 - delete

4.33 - delete

4.36 - (NI) - to read "Shiphandler's guide (1996)"

4.37 - delete

4.38 (NI) - Bridge team management, a practical guide (ISBN: 18 700 77148) (1993)

4.39 (NI) - Bridge watchkeeping, a practical guide (ISBN: 18 700 77172) (1994)

4.40 (NI) - The work of the harbour master, a practical guide (ISBN: 18 700 77209) (1998)

5 Cargo and Passenger Handling at Ship/Port Interface

5.7 (IICL) - Guide for Container Equipment Inspection (1996) (endorsed by IICL, ICS and SOIC)

5.8 (IICL) - Repair manual for steel freight containers (1992)

5.9 (IICL) - General Guide for refrigerated container inspection and repair (1996)

5.11 (IMO) - International Convention for Safe Containers (IMO-282E) (1996)

5.13 - delete

5.16 (IMO) - Code of Safe Practice for Cargo Stowage and Securing (IMO-292E) (1992) and 1994/1995 Amendments to the Code (IMO-295E) (1995)

5.26 (ICHCA) - The safe use of flexible intermediate bulk containers (1997)

5.49 - delete

5.57 (IMO) - Guidelines for the Preparation of the Cargo Securing Manual (IMO-298E) (1997)

5.59 (IMO/ILO/UN ECE) (IMO/ILO/UN ECE Guidelines for Packing of Cargo Transport Units (CTUs) (IMO-284E) (1997)

5.61 (IMO) Res. A 862(20) - Code of Practice for the Safe Loading and Unloading of Bulk Carriers (1997)
Note: soon to be published as IMO - 266E)

5.62 (ICHCA) - Safe working on container ships (1998)

5.63 (ICHCA) - The International Convention for Safe Containers (1997)

5.64 (ICHCA) - Safety audit systems for ports (1998)

5.65 (ICHCA) - The loading and unloading of Solid Bulk Cargoes (1998)

5.66 (ICHCA) - Health and Safety Assessments in ports (1998)

5.67 (IICL) - Guide for container damage measurement (1997)

6 Dangerous Cargoes

6.18 (IMO) - International Maritime Dangerous Goods (IMDG) Code (IMO-200E) (1994) and Amendment 28-96 (IMO-224E) (1996)
(Note: Amendment 29-98 will soon be published)

6.19 (IMO) - Supplement to the IMDG Code (IMO-200E) (1994) and (IMO-230E) (1996)

6.23 (IMO/ILO/UN ECE) - IMO/ILO/UN ECE Guidelines for Packing of Cargo Transport Units (CTUs) (IMO-284E) (1997)

6.24 (IMO) - Recommendations on the Safe Use of Pesticides in Ships (IMO-267E) (1996)

6.28 (IMO) - MSC/Circ.857- Revised Medical First Aid Guide for use in Accidents Involving Dangerous Goods (MFAG) (1998)

6.33 (IMO) - Res. A.851(20) - General principles for ship reporting systems and ship reporting requirements, including guidelines for reporting incidents involving dangerous goods, harmful substances and/or marine pollutants (1997)

6.48 (IMO) - MSC/Circ.859 - Inspection programmes for Cargo Transport Units (CTUs) carrying dangerous goods (1998)

6.50 - delete

6.51(IMO) - FAL.2/Circ.49 - Dangerous goods manifest (1997)

7 Risk

7.10 (IMO) - Res. A.867(20) - Combating unsafe practices associated with the trafficking or transport of migrants by sea (1997)

7.11 (IMO) - Res. A.871(20) - Guidelines on the allocation of responsibilities to seek the successful resolution of stowaway cases (1997)

7.12 (IMO) - Res. A.872(20) - Guidelines for the prevention and suppression of the smuggling of drugs, psychotropic substances and precursor chemicals on ships engaged in international maritime traffic (1997)

7.13 (NI) - Crime at Sea, a practical guide (ISBN: 18 700 77326) (1996)

7.14 (NI) - Illegal drugs by sea (ISBN: 18 700 7744X) (1998)

8 Contingency Planning

8.11 (IMO) - Supplement to the IMDG Code (IMO-200E) (1994) and (IMO-230E) (1996)

(Note: Amendment 29-98 will soon be published)

8.14 (IMO) - MSC/Circ.559 - Guidelines to ensure reporting, to the Organization, of incidents involving dangerous goods and marine pollutants in packaged form on board ship and in port areas (1991)

8.15 (IMO) - Res. 851(20) - General principles for ship reporting systems and ship reporting requirements, including guidelines for reporting incidents involving dangerous goods, harmful substances and/or marine pollutants (1997)

10 Training and Procedures

10.25 (NI) - Maritime education and training (ISBN: 18 700 77415) (1997)

11 Co-operation between Ports and Information Exchange

11.12 - delete

11.17 (IMO) - FAL.6/Circ.5 - Communications between maritime administrations and ports/terminals (1997)

12 Facilitation

12.16 (IMO) - Res. A.867/20 - Combating unsafe practices associated with the trafficking or transport of migrants by sea (1997)

12.17 (IMO) - Res. A.871(20) - Guidelines on the allocation of responsibilities to seek the successful resolution of stowaway cases (1997)

12.18 (IMO) - Res. A.872(20) - Guidelines for the prevention and suppression of the smuggling of drugs, psychotropic substances and precursor chemicals on ships engaged in international maritime traffic (1997)

13 Administration

13.9 Replace "(IN)" by "(NI)"

15 Inspections of ships

15.8 (IMO) - MARPOL 73/78 Consolidated Edition, 1997 (IMO-520E)

15.11 - delete

15.13 (IMO) - Procedures for port state control (IMO-650E) (1997)

15.15 - delete

16 Pollution Prevention

16.7 (IMO) - Manual on Oil Pollution

Section I - Prevention (IMO-557E) (1983)

Section II - Contingency planning (IMO-650E) (1995)

Section IV - Combating oil spills (IMO-569E) (1988)

Section V - Administrative aspects of oil pollution response (IMO-572E) (1996)

16.9 (IMO) - Manual on Chemical Pollution

Section I - Problem assessment and response arrangement (IMO-630E) (1987)

Section II - Search and recovery of packaged goods lost at sea (IMO-633E) (1991)

16.18 - delete

16.19 Replace "(Nautical Institute)" by "(NI)"

16.20 - delete

ANNEX 2

OUTLINE OF IMO MODEL COURSE FOR THE SAFE PACKING OF CARGO TRANSPORT UNITS

The model course will get the following *approximate* content:

- Foreword and Introduction; 5 pages
- Course Framework; 5 pages
- Course Outline with Course Timetable; 5 pages
- Detailed Teaching Syllabus; 10 pages
- Instructor Manual with Example of Lesson Plans and Practical and Theoretical Exercises; 40 pages
- Evaluation; 5 pages
- Over Heads; 25 pieces
- Compendium with Quick Lashing Guide; 25 pages

ANNEX 3**COURSE OUTLINE FOR TERMINAL OPERATORS FOR THE LOADING AND UNLOADING OF DRY SOLID BULK CARGOES****SCOPE:**

The course is primarily intended for port and terminal personnel, inclusive of longshoremen, and those directly responsible for and/or are in a position to influence the safe and expeditious conduct of port operations, particularly in the loading/unloading and storage of dry/solid bulk cargoes, in keeping with all IMO guidelines and procedures (SOLAS, BLU Code), applicable legislative requirements, port and terminal guidelines and/or procedures and instructions.

OBJECTIVES:

In keeping with the national and international rules, regulations and codes, enhance bulk carrier safety and promote environmentally sound, safe and secure working relationships between ships crews and dry/solid bulk terminal operators and, at the same time, while augmenting the safety and seaworthiness of a loaded dry bulk cargo vessel, ensure improved ship turn-around time.

ANTICIPATED RESULTS:

Those involved in the handling and movement of dry/solid bulk cargoes upon successful completion of the course will be able to effectively communicate and evaluate risks, plan proactively with respect to onsite equipment use, understand safety, security and expeditious loading/unloading of an assortment of dry/solid bulk cargoes into and out of vessels, as well as in respect of the proper care and storage of such cargoes and their final transportation to and from the port limits.

Also, it is expected that, the relationship, mutual understanding and cooperation between the participants (port, terminal, ship, and safety administration) will be enhanced; and, each others' routine and/or special requirements acknowledged and respected - team effort.

PRE-REQUISITE:

The course is primarily designed for terminal representatives who already have, at least, some knowledge and experience of the marine industry involving ship/port interface, and some experience and knowledge of various types of dedicated dry/solid bulk carriers and conventional vessels capable of carrying a mix of cargoes, including small parcels of dry/solid bulk cargoes but can also be used by other personnel involved in terminal and port operators.

COURSE CONTENT**Introduction: (UK)**

- 1 Premise, contributing factors to structural failure, ship losses, etc.

Guiding Principles: (UK)

- 1 SOLAS (Adoption of amendments to the Annex to SOLAS 1974, Res. A. 434(XI), A.713(17) and A.797(19) adopted by the Assembly of the IMO) - awareness and understanding the contents;
- 2 Resolution A.862(20) adopted on 27 November 1997; Code of Practice for the Safe Loading and Unloading of Bulk Carriers - awareness and understanding the contents (BLU Code).
- 3 IACS Brochure - "Bulk Carriers, Guidance and information on bulk cargo loading and discharging to reduce the likelihood of over-stressing the hull structure".

Definitions: (UK)

- 1 Dry and solid bulk cargoes and carriers, terminal, stevedores/longshoremen, port personnel, operators, transient labour, equipment fixed and mobile, air draught, combination carriers - OBO or O/O, conveyor system, hot work, list indication lights, master, port, terminal representative, trimming - loading cargo, unloading cargo, ship, cargo characteristics and properties, angle of repose, liquefaction, moisture limit, etc.;
- 2 Ship - dimensions, tonnage, stability, stresses, load line marks, etc.

Personnel: (Germany)

- 1 Classification Societies, Port Wardens, Marine Surveyors and Cargo Surveyors - role and responsibilities;
- 2 Port Authority (Port Management) and operational staff - role and responsibilities;
- 3 Terminal Management and staff - role and responsibilities;
- 4 Ship - master, officers and crew role and responsibilities;
- 5 Labour - occupational health and safety, work place health hazard information requirements, etc.

Bulk-Carriers, Ship Management and Operation: (Germany/Canada*)

- 1 Types of dry and solid bulk carriers - general construction (shell plating, transverse bulkheads in cargo holds, deck structure including cross strips, main cargo hatchways, hatch covers, coamings and topside tanks, double bottom and hopper structure, etc.);
- 2 Planning, control and monitoring - ship (inspection, cargo receiving, preparation to load/unload - limitations and/or restrictions);
- 3 Loading manuals and instruments;

* Co-ordinator

- 4 Code of Safe Practice for Solid Bulk Cargoes (BC Code);
- 5 Charterparties, bills of lading, etc. - considerations;
- 6 SOLAS Chapter XII;
- 7 International Code for the Safe Carriage of Grain in bulk;
- 8 Completion cargo work - ship.

Port Lay-out and Terminal Management/Operation: (ICHCA)

- 1 Port lay-out (quay, wharf, pier, etc., shed, covered/open storage -types and access, environmental considerations, etc.);
- 2 Facility/terminal construction, control, administration, restrictions, load limits, maximum size of vessel, mooring arrangements, depths, etc.;
- 3 Planning, control and monitoring - terminal (inspection, cargo receiving, preparation to load/unload - limitations and/or restrictions);
- 4 Maintenance of facility/terminal (cleanliness, environmental care and friendliness -dust control, spouts);
- 5 Handling - equipment (manual), related automatic equipment, weighing equipment and cargo - training and related considerations;
- 6 Solid bulk cargo density declaration - reason and follow-up;
- 7 Testing of material - moisture content and follow-up and other relevant cargo properties;
- 8 Loading/unloading rates - considerations;
- 9 Loading/unloading in varying conditions (shallow draught, tide-way, mid-stream, etc.);
- 10 Completion cargo work - terminal.

Communications: (Germany)

- 1 Ship/shore safety/operational check-list and information exchange;
- 2 Procedures between the ship and terminal prior to, during and upon completion of cargo handling - information, limitations or restrictions;
- 3 Emergency plans and procedures - ship/terminal/port, exchange of information.

Shared Responsibilities - Ship/Terminal (Canada):

- 1 Cargo loading/unloading and handling of ballast - responsibility ship/terminal;
- 2 Documentation - compliance certificates, IMO requirements, shippers' declaration, fitness to proceed, reference materials (BC Code, and related Recommendations, etc.), etc.;
- 3 Ongoing safety and security of the terminal and docked vessels - working/not working.

Environment: (IUMI)

- 1 Aquatic and surface - dust control, pollution prevention, retention on board of polluted and spent liquids and/or waste;

Climate: (IUMI)

- 1 Climate - weather conditions and considerations.

Cases - History: (IUMI)

- 1 Overview of accidents involving bulk carriers - post-mortem and lessons learned.

ANNEX 4

REVISED LIST OF IMO INSTRUMENTS WITH POTENTIAL IMPLEMENTATION AND/OR TRAINING REQUIREMENTS FOR PORTS AND OTHERS

	Priority
International Convention for the Safety of Life at Sea, 1974, (SOLAS) as amended	L
International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (MARPOL 73/78)	L
International Convention on Oil Pollution Preparedness, Response and Co-operation (OPRC), 1990	L
International Convention for Safe Containers (CSC)	H*
Recommendations on the Safe Transport of Dangerous Cargoes and Related Activities in Port Areas	H
International Maritime Dangerous Goods (IMDG) Code	H*
International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (IBC Code)	L
International Code for the Construction and Equipment of Ships Carrying liquified gases in Bulk (IGC)	L
Code of Safe Practice for Solid Bulk Cargoes (BC Code)	M
Code of Practice for the Safe Loading and Unloading of Bulk Carriers (BLU Code).....	H
IMO/ILO/UN ECE Guidelines for Packing of Cargo Transport Units (CTUs) .. H*	
Recommendations on the Safe Use of Pesticides in Ships	M**
Code of Safe Practice for Ships Carrying Timber Deck Cargoes	L
Code of Safe Practice for Cargo Stowage and Securing (CSS Code)	H*
Code for the Safe Carriage of Irradiated Nuclear Fuel, Plutonium and High-level Radioactive Wastes in Flasks on board Ships (INF Code)	H*
International Code for the Safe Carriage of Grain in Bulk (International Grain Code)....	M**
Comprehensive Manual on Port Reception Facilities	H

* To be developed as a package.

** Also to be developed as a package.

ANNEX 5

**TRAINING NEEDS FOR THE MULTIMODAL TRANSPORT OF DANGEROUS
GOODS UNDER THE IMDG CODE**

Individuals performing following tasks	Recommended Training Areas	Available Training Material (manuals, schemes, etc.)
1. Classify DG*	Classification requirements	1, 4, 11, 12, 20 and 21
2. Pack DG in packages	Classes. Packaging requirements, types of packages, segregation, first aid, emergency procedures	1, 2, 3, 4, 6, 19, 20 and 21
3. Manufacture packagings	Testing requirements; packaging requirements	1, 4 and 5
4. Mark, label or placard DG	Classes; marking, labelling and placarding requirements	1, 4, 6, 19, 20 and 21
5. Prepare transport documents for DG	Documentation requirements	1, 20 and 21
6. Offer DG	Thorough knowledge of the IMDG Code except testing and classification requirements; local requirements at destination	1, 19, 20 and 21
7. Accept DG for transport	As 6. above; port regulations in loading and discharging ports regarding quantity limitations, storage and segregation requirements, where applicable.	1, 7, 19, 20 and 21
8. Carry DG in transport	Documentation; classes; marking; labelling and placarding; stowage requirements, where applicable; segregation requirements; cargo securing requirements; emergency procedures; first aid requirements	1, 2, 3, 4, 6, 7, 9, 13, 14, 15, 19, 20 and 21
9. Handle DG in transport	As 8. above and safe handling procedures	1, 2, 3, 4, 6, 7, 9, 13, 14, 15, 19, 20 and 21.

Note: Numbers in the last column refer to the list of references in attachment 4 to this annex.

* DG: Dangerous goods.

Individuals performing following tasks	Recommended Training Areas	Available Training Material (manuals, schemes, etc.)
10. Load DG into ships.	As 9. above; stowage requirements; document of compliance	1, 2, 3, 4, 6, 7, 9, 13, 14, 15, 19, 20 and 21
11. Unload DG from ships	As 9. above but stowage and segregation requirements as per local bye-laws	1, 2, 3, 4, 6, 7, 9, 13, 14, 15, 19, 20 and 21
12. Packing CTUs**	As 9. above	1, 2, 3, 4, 6, 7, 9, 13, 14, 15, 19, 20 and 21
13. Unpack CTUs	As 9. above except segregation requirements	1, 2, 3, 4, 6, 7, 9, 13, 14, 15, 19, 20 and 21
14. Enforce compliance with applicable rules and regulations	Knowledge commensurate with the task assigned	-
15. Carry out inspections	As 14. above	-
16. Clean CTUs	Need for cleaning and removal of placards, marks and labels; classes; emergency procedures; first aid	1, 6, 19, 20 and 21
17. Are otherwise involved in the transport of DG as determined by the competent authority	As required by the competent authority commensurate with the task assigned	-

** CTUs: Definition as per IMO/ILO/UN ECE Guidelines for Packing of Cargo Transport Units (CTUs).

ATTACHMENT 1

Resolution A.537(13)**RECOMMENDATION ON TRAINING OF OFFICERS AND RATINGS
RESPONSIBLE FOR CARGO HANDLING ON SHIPS CARRYING
DANGEROUS AND HAZARDOUS SUBSTANCES
IN PACKAGED FORM****1. PREAMBLE**

- 1.1 Training should be divided into two parts, a general part on the principles involved and a part on the application of such principles to ship operation. Any of this training may be given at sea or ashore. Such training should be supplemented by practical instruction at sea, and where appropriate, in a suitable shore based installation. All training and instruction should be given by properly qualified personnel.

2 PRINCIPLES**2.1 Elementary science**

- 2.2.1 The important physical characteristics and chemical properties of dangerous and hazardous substances, sufficient to give a basic understanding of the intrinsic hazards and risks involved.

2.2 Classification of dangerous and hazardous substances and materials possessing chemical hazards

- 2.2.1 IMO classes 1-9 and the hazards associated with each class. Materials hazardous only in bulk (MHB)

2.3 Health hazards

Dangers from skin contact, inhalation, ingestion and radiation.

2.4 Conventions, regulations and recommendations

- 2.4.1 General familiarisation with the relevant requirements of Chapters II-2 and VII of the 1974 SOLAS Convention and of Annex III of the 1973/78 MARPOL instrument.
- 2.4.2 General familiarisation with the IMO Recommendation on Safe Transport, Handling and Storage of Dangerous Substances in Port Areas.

2.5 General use of and familiarisation with the International Maritime Dangerous Goods (IMDG) Code

2.5.1 Declaration, documentation, packaging, labelling and placarding. Freight container and vehicle packing. Portable tanks, tank containers and road tank vehicles, and other transport units for dangerous substances.

2.5.2 General requirements for stowage, securing, separation and segregation in different ship types.

General cargo ships.

Ro-ro ships.

Container ships.

Shipborne barges on barge-carrying ships.

Combination carriers.

2.5.3 Safety of personnel including safety equipment, measuring instruments, their use and practical application and interpretation of results.

3 SHIP APPLICATION

3.1 Handling, stowage and segregation

3.1.1 Class 1 - Explosives

Hazard divisions, compatibility groups and stowage categories.

Suitability of cargo spaces.

Magazines.

Security.

Segregation within class 1.

3.1.2 Class 2 - Gases (compressed, liquefied or dissolved under pressure) flammable, non-flammable and toxic.

Types of pressure vessels and portable tanks.

Relief and closing devices.

3.1.3 Class 3 - Flammable liquids

Classes.

Receptacles, tank containers and portable tanks.

Road tank vehicles.

Empty receptacles.

Ventilation and drainage of compartments.

3.1.4 Class 4.1 - Flammable solids

Class 4.2 - Flammable solids or substances liable to spontaneous combustion

Class 4.3 - Flammable solids or substances which in contact with water emit flammable gases.

Measures used to prevent heating, ignition, or the emission of toxic or flammable gases.

3.1.5 Class 5 - Oxidising substances (agents) and organic peroxides

Reaction with acids.

Sensitivity to heat.

Explosive decomposition.

Prevention of spillage

Separation from combustible materials.

3.1.6 Class 6 - Poisonous (toxic) and infectious substances

Prevention of leakage.

Contamination of foodstuffs.

Working areas and living accommodation.

Ventilation.

3.1.7 Class 7 - Radio active substances.

Types of packages.

Full load shipments.

Segregation.

Decontamination.

Transport index.

Stowage limitations.

3.1.8 Class 8 - Corrosives

Dangers from leakage and spillage.

Dangers from wetted substances.

3.1.9 Class 9 - Miscellaneous dangerous substances

Examples and associated hazards.

3.1.10 Materials hazardous only in bulk (MHB)

Examples and associated hazards.

3.2 **Safety precautions and emergency procedures**

3.2.1 Electrical safety in cargo spaces.

3.2.2 Precautions to be taken for entry into enclosed spaces that may contain oxygen-depleted, poisonous or flammable atmospheres.

3.2.3 The possible effects of spillage or fire in shipments of substances of each class.

3.2.4 Consideration of events on deck or below deck.

3.2.5 IMO Emergency Procedures for Ships Carrying Dangerous Goods.

Emergency plans and procedures to be followed in case of incidents involving dangerous substances.

3.3 **Medical first aid**

3.3.1 The IMO Medical First Aid Guide for Use in Accidents Involving Dangerous Goods (MFAG).

Use and application in association with other guides.

Medical advice by radio.

ATTACHMENT 2

EC DIRECTIVE 96/35/EC ON THE APPOINTMENT AND VOCATIONAL QUALIFICATION OF SAFETY ADVISORS FOR THE TRANSPORT OF DANGEROUS GOODS BY ROAD, RAIL AND INLAND WATERWAYS**Subjects referred to in Article 5(4)**

The knowledge required to qualify for a certificate must include at least the following:

I. General preventive and safety measures:

- knowledge of the types of consequences which may be caused by an accident involving dangerous goods,
- knowledge of the main causes of accidents.

II. Provisions relating to the mode of transport used under national law, Community standards, international conventions and agreements, with regard to the following in particular:

1. the classification of dangerous goods:

- the procedure for classifying solutions and mixtures,
- the structure of the description of substances,
- the classes of dangerous goods and the principles of their classification,
- the nature of the dangerous substances and articles transported,
- their physical, chemical and toxicological properties;

2. general packaging requirements, to include tankers, tank-containers, etc.:

- types of packaging, codification and marking,
- packaging requirements and prescriptions for testing packaging,
- the state of packaging and periodic checks;

3. danger markings and labels:

- the markings on danger labels:
- the placing and removal of danger labels,

- placarding and labelling;
- 4. references in transport documents:
 - information in the transport document,
 - the consigner's declaration of conformity;
- 5. the method of consignment and restrictions on the dispatch:
 - full load,
 - bulk transport,
 - transport in large bulk containers,
 - container transport,
 - transport in fixed and removable tanks;
- 6. the transport of passengers;
- 7. prohibitions and precautions relating to mixed loading;
- 8. the segregation of substances;
- 9. limits on the quantities carried and quantities exempt;
- 10. handling and stowage:
 - loading and unloading (filling ratios),
 - stowage and segregation;
- 11. cleaning and/or degassing before loading and after unloading;
- 12. crews: vocational training;
- 13. vehicle papers:
 - the transport document,
 - written instructions,
 - the vehicle-approval certificate,
 - the vehicle driver's training certificate;

- attestation of training in inland waterway transport,
 - copies of any derogations,
 - other documents;
14. safety instructions: implementation of the instructions and driver-protection equipment;
 15. surveillance obligations: parking;
 16. traffic and navigation regulations and restrictions;
 17. operational and accidental discharges of pollutants;
 18. requirements relating to transport equipment.

ATTACHMENT 3

**EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL
CARRIAGE OF DANGEROUS GOODS BY ROAD (ADR),
APPENDIX B.4**

**Provisions concerning the training for drivers
of vehicles carrying dangerous goods**

**240 000-
240 099**

SECTION 1. General, structure of the training and training programme

240 100 (1) Training shall be given in accordance with the provisions of this Appendix on the basis of marginals 10 315, 11315 and 71 315.

(2) The necessary knowledge and skills shall be imparted by training covering theoretical courses and practical exercises. The knowledge shall be tested in an examination.

Structure

240 101 Initial and refresher training shall be given in the form of a basic course and, when applicable, specialisation courses.

240 102 Subjects to be covered by the basic course will be, at least:

- (a) the general requirements governing the carriage of dangerous goods;
- (b) the main types of hazard;
- (c) information on environmental protection in the control of the transfer of wastes;
- (d) preventive and safety measures appropriate to the various types of hazard;
- (e) what to do after an accident (first aid, road safety, basic knowledge about the use of protective equipment, etc.);
- (f) labelling and marking to indicate danger;
- (g) what a driver should and should not do during the carriage of dangerous goods;
- (h) the purpose and the method of operation of technical equipment on vehicles;
- (i) prohibitions on mixed loading in the same vehicle or container;
- (j) precautions to be taken during loading and unloading of dangerous goods;

- (k) general information concerning civil liability;
- (l) information on multimodal transport operation;
- (m) handling and stowage of packages.

240 103 Special subjects to be covered by the specialisation course for transport in tanks shall be, at least:

- (a) the behaviour of vehicles on the road, including movements of the load;
- (b) specific requirements of the vehicles;
- (c) general theoretical knowledge of the various and different loading and discharge systems;
- (d) specific additional provisions applicable to the use of those vehicles (certificates of approval, approval marking, marking and labelling, etc.).

240 104 Special subjects to be covered by the specialisation course for the transport of substances and articles of class 1 shall be, at least:

- (a) specific hazards related to explosive and pyrotechnic substances and articles;
- (b) specific requirements concerning mixed loading of substances and articles of class 1.

240 105 Special subjects to be covered by the specialisation course for the transport of radioactive material of class 7 shall be, at least:

- (a) specific hazards related to ionizing radiation;
- (b) specific requirements concerning packing, handling, mixed loading and stowage of radioactive material;
- (c) special measures to be taken in the event of an accident involving radioactive material.

Initial training programme

- 240 106** (1) The minimum duration of the theoretical element of each initial course or part of the comprehensive course shall be as follows:

Basic course	18 teaching units*
Specialisation course for transport in tanks	12 teaching units ¹
Specialisation course for transport of substances and articles of Class 1	8 teaching units
Specialisation course for transport of radioactive material	8 teaching units

The total duration of the comprehensive course may be determined by the competent authority, who shall maintain the duration of the basic course and the specialised course for tanks, but may supplement it with shortened specialised courses for classes 1 and 7.

- (2) Teaching units are intended to last 45 minutes.
- (3) Normally, not more than 8 teaching units are permitted on each day of the course.
- (4) The individual practical exercises shall take place in connection with the theoretical training and shall at least cover first aid, fire-fighting and what to do in case of an incident or accident.

Refresher training programme

- 240 107** (1) Refresher training courses undertaken at regular intervals serve the purpose of bringing the drivers' knowledge up to date; they shall cover new technical, legal and substance-related developments.
- (2) Refresher courses shall have been completed before the period referred to in marginal 10 315 (3) has expired.
- (3) The duration of each refresher course shall be of at least one day.
- (4) Normally, not more than 8 teaching units shall be permitted on each day of the course.

**240 108-
240 199**

* *Additional teaching units are required for practical exercises referred to in (4) below which will vary depending on the numbers of drivers under instruction.*

ATTACHMENT 4

LIST OF PUBLICATIONS, MANUALS, ETC.

1. International Maritime Dangerous Goods (IMDG) Code with Amdt. 28 IMO 1996
2. Emergency Procedures for Ships Carrying Dangerous Goods (EmS), Supplement to the IMDG Code IMO 1994 with Amdt. 28 - 96
3. Medical First Aid Guide for Use in Accidents Involving Dangerous Goods (MFAG), Supplement to the IMDG Code IMO 1994
4. United Nations Recommendations on the Transport of Dangerous Goods, 10th Ed 1997
5. United Nations Recommendations on the Transport of Dangerous Goods, Manual of Tests and Criteria 1995
6. IMO/ILO/UN ECE Guidelines for Packing of Cargo Transport Units (CTUs), IMO 1997
7. Recommendations on the Safe Transport of Dangerous Cargoes and Related Activities in Port Areas, IMO 1995
8. International Convention for Safe Containers, 1972 as amended IMO 1996
9. Code of Safe Practice for Cargo Stowage and Securing (CSS Code) IMO 1992, Amdt. 1994/95
10. Recommendations on the Safe Use of Pesticides in Ships, Supplement to the IMDG Code 1996 Amdt.
11. International Convention for the Safety of Life at Sea (SOLAS) 1974, IMO 1997 consolidated edition
12. International Convention for the Prevention of Pollution from Ships 1973 as modified by the Protocol of 1978 (MARPOL 1973/78), IMO 1997 consolidated edition
13. UNEP/IMO APELL for Port Areas (MEPC Circ 306)
14. OECD/IMO Guiding Principles on Chemical Accident Prevention, Preparedness and Response in Ports
15. OECD/IMO Guidance concerning Chemical Safety in Port Areas
16. European Agreement Concerning the International Carriage of Dangerous Goods by Road (ADR) 1996

17. IMO resolution A.537(13) on Training of Officers and Ratings Responsible for Handling on Ships Carrying Dangerous and Hazardous Substances in Solid Form in Bulk or in Packaged Form
 18. Council Directive 96/35/EC on the Appointment and Vocational Qualification of Safety Advisers for the Transport of Dangerous Goods by Road, Rail and Inland Waterway 3rd June 1996
 19. Dangerous Goods in Cargo Transport Units : Packing and Carriage for Transport by Sea UK HSE and MCA 1998
 20. Guidelines for shipping packaged dangerous goods by sea UK Chemical Industries Association 1997 [DSC 3/INF.8]
 21. Completion Guide for the SITPRO Dangerous Goods Note SITPRO
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